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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,414	09/27/2001	Shinichi Wakui	N9450.0032/P032	8969

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DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP  
2101 L STREET NW  
WASHINGTON, DC 20037-1526

EXAMINER

WAKS, JOSEPH

ART UNIT PAPER NUMBER

2834

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/963,414

Applicant(s)

WAKUI ET AL.

Examiner

Joseph Waks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In line 2, "comprising", lines 7, 9, 11-13 and 18, "said", line 9, "characterized in that" is a legal phraseology that should be avoided.

The first sentence is not finished, the text in parenthesis should be avoided, and the element numbers should be deleted or placed in parenthesis.

### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are replete with indefinite language as clearly indicated below. Appropriate corrections in all claims are required.

In claim 1, line 2, "the rotor core", line 4, "the circumferential ends", lines 9 and 10-11, "the axis", lines 9 and 12, "the center direction", line 11, "the interpolar direction", line 14, "the radial direction" and "the outer periphery", line 16, "said rotor core" lack antecedent basis, lines 5-6, "outer periphery" should be --an outer periphery--, lines 7-8, "embedded permanent magnets" should be --said embedded permanent magnets--, lines 9-10, "the magnetic pole" lacks antecedent basis and is ambiguous, examiner suggests --one of the magnetic poles--, line 10, "d-axis" should be --a d-axis--, line 13, "q-axis" should be --a q-axis--, and line 17, "d-axis" should be --said d-axis-- and "q-axis" should be --said q-axis--.

In claim 2, lines 14-15, "an angle with respect to the rotor center between the end of two adjacent magnetic flux short circuit preventive holes" is indefinite since each hole had at least two different ends in circumferential and radial direction.

In claim 4, line 4 "'a'" and "'b'" and line 5, "'b'" renders the claim indefinite because the claimed apparatus includes elements not actually disclosed (those encompassed by quote unquote sign) and the scope of the claim is unascertainable.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1 and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by **Narita et al. (JP 11-103545 A)**.

**Narita et al.** disclose in Figure 26 invention as claimed: a rotor core 12 with embedded permanent magnets 3, magnetic flux short circuit preventing holes 4 extending from the circumferential ends of the magnets to the vicinity of the outer periphery of the rotor core wherein the radial distance between the outer periphery of the preventive hole and the outer periphery of the core is increasing gradually in conformity to the approach to the d-axis side from the q-axis side.

7. **Claims 1, 2, 3/1, 3/2, 10 and 11** are rejected under 35 U.S.C. 102(e) as being anticipated by **Sakai et al. (US 6,274,960)**.

**Sakai et al.** disclose in Figures 15A-18 invention as claimed: a rotor core 4 with embedded permanent magnets 6 constituting four magnetic poles, magnetic flux short circuit preventing holes 5a extending from the circumferential ends of the magnets to the vicinity of the outer periphery of the rotor core wherein the radial distance between the outer periphery of the preventive hole and the outer periphery of the core is increasing gradually in conformity to the

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approach to the d-axis side from the q-axis side, and the angle between the ends of two adjacent holes is smaller than the angle formed by the outer periphery of the magnets with respect to the rotor center (see Figure 18).

***Allowable Subject Matter***

8. **Claims 4/3/1- 9/8/4/3/1 and 4/3/2-9/8/4/3/2** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The feature of the flux short circuit preventive holes having radial distances a and selected with the ratio of a to b being about 1 to 3 or 1 to 4, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

***Prior Art***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

  
JOSEPH WAKS  
PRIMARY PATENT EXAMINER  
TC-2800

JW  
November 29, 2002